



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/537,473

03/16/2006

Josef Buechler

510.1140

3261

23280 7590 06/25/2008
Davidson, Davidson & Kappel, LLC
485 7th Avenue
14th Floor
New York, NY 10018

EXAMINER

BARKER, MATTHEW M

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

06/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/537,473	Applicant(s) BUECHLER ET AL.	
	Examiner MATTHEW M. BARKER	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-24 is/are rejected.
- 7) ☒ Claim(s) 18, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the radar system of claim 12, motor vehicle of claims 19 and 23, radar transmitter of claim 21, and the cooperative radar device system of claim 22 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 18, 20, and 21 are objected to because of the following informalities:

In line 1 of claim 18, the words "at least" should be removed.

In line 2 of claim 20, "feeding" should be changed to --feed--.

In line 4 of claim 21, the language "a of" should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fiden (4,733,238).

Regarding claim 12, Fiden discloses a radar device (Figures 1 +2) having a sensor and transmitter configured to transmit data, wherein the sensor and transmitter are simultaneously operable for a communication (column 2, lines 11-13).

Regarding claim 20, Fiden discloses a receiver (Figure 2) configured to receive a communication data signal and feed the data to a demodulation device, wherein the communications data signal is in a radar signal of a radar system according to claim 12 (see column 4, lines 50-52; column 2, lines 17-18).

Claim Rejections - 35 USC § 103

Art Unit: 3662

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden as applied to claim 12 above.

Regarding claims 19 and 23, Fiden does not explicitly disclose that the system is for a motor vehicle. Fiden does disclose it is for airborne, ship borne, and land based systems (column 1, lines 19-20). It would have been obvious to one of ordinary skill in the art to utilize the system of Fiden on a motor vehicle given the “land based” teaching of Fiden with no new or unexpected results.

7. Claims 13-15, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden as applied to claim 12 above, and further in view of Hillman (WO 00/37960).

Regarding claims 13 and 14, 21 and 24, Fiden discloses that the radar device is a pulse type radar device (column 5, lines 24-26), and that a transmitter element (40) is configured to simultaneously emit a broadband signal for sensing and a communications data signal as discussed above. The device inherently has a predefined transition/reception spectrum. Fiden does not disclose a notch filter to selectively attenuate frequency subranges containing spectral components of a sensing signal within a peripheral region of the transmission frequency range. Hillman discloses

a related system and method where voice and data must be transmitted simultaneously. Hillman utilizes a notch filter to selectively attenuate frequency subranges containing spectral components of the data signal in a peripheral region of the transmission frequency range (Figures 5a-5c; page 12, lines 21-27). It would have been obvious to one of ordinary skill in the art to modify Fiden to utilize a notch filter and transmit data on the attenuated frequencies as taught by Hillman in order to eliminate the expense and complications necessitated by the modulation of the radar signal with the data signal.

Regarding claim 15, Hillman does not disclose that the peripheral region includes no more than the upper and lower 10% of the spectrum. However, Hillman does disclose that a frequency in the peripheral is chosen because more important energy resides at lower frequencies. It would have been obvious to further modify Fiden to use no more than the upper or lower 10% of the spectrum for data communications in order to minimize loss of the radar signal (see Hillman page 12, lines 32-35).

8. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden in view of Hillman as applied to claim 13 above, and further view of Levin et al. (2002/0003488).

Neither Fiden nor Hillman disclose a plurality of frequency bands, each for the transmission of data from a different data class including at least one of emergency, log, and communications data.

Levin discloses a related combination radar and communication data system which transmits data of different classes including at least one of emergency, log, and

Art Unit: 3662

communications (paragraph 0024). While Levin does not disclose transmitting on different frequency bands, one of ordinary skill in the art would have found it obvious to further modify Fiden do so in order to prevent interference and/or loss of data just as Hillman taught separating data from voice communication for the same purpose.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden as applied to claim 12 above, and further in view of Levin, and Hodgson (4,403,208) , and Song (5,208,756).

Fiden does not specify what information is included in the data communication, and therefore does not disclose amplitude modulation for emergency data and PSK types of modulation for communications and log data.

Levin discloses transmitting emergency, communications, and log data (paragraph 0024). Levin also does not specify the claimed types of modulation for the data. Hodgson discloses a system for transmitting emergency information between vehicles using amplitude modulation (Abstract; column 11, lines 19-35). Song discloses a vehicle communication system using PSK types of modulation for communications and log data (Abstract; column 6, lines 40-44). Furthermore, Fiden does disclose that any types of modulation may be used (column 6, lines 30-33). It would have been obvious to one of ordinary skill in the art to include emergency, log, and communications data as taught by Levin as part of the data communications of Fiden in order to improve safety, using the well known modulation types as demonstrated by

Hodgson and Song and provided for by Fiden himself with no new or unexpected results.

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden as applied to claim 12 above, and further in view of Levin.

Fiden does not disclose a plurality of radar systems configured to exchange data with each other. Levin discloses a related combination radar and communication data system including a plurality of systems configured to sense their surroundings and exchange data with each other (Figure 1; paragraph 0024). It would have been obvious to modify Fiden to include multiple systems as taught by Levin in order to improve safety (Levin paragraph 0024).

Response to Arguments

11. Applicant's arguments, see Remarks, filed 3/26/2008, with respect to the rejection(s) of claim(s) 12-24 have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art relates to various vehicle radar and combination radar and data communication systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW M. BARKER whose telephone number is (571)272-3103. The examiner can normally be reached on M-F, 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew M Barker/
Examiner, Art Unit 3662

/Thomas H. Tarcza/
Supervisory Patent Examiner, Art Unit 3662